Coleoptera cincindelidae beetle in the eye

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ABSTRACT

We report a case of a *Coleoptera cincindelidae* beetle that accidentally buried itself into the conjunctiva of the right eye of a 27-year-old man for five days. The beetle was difficult to remove but the patient suffered no long-term sequelae after removal of the insect. The eye returned to normal within a few days. The size of the beetle is similar to toxic beetles found in East Africa and similar injuries caused by beetle landing in the eye may happen in other parts of the world.

Keywords: beetles, conjunctival injuries, eye foreign bodies, insect injuries, ocular injuries

Singapore Med J 2005; 46(10):564-565

INTRODUCTION

The diagnosis and management of ocular injuries caused by caterpillar setae[1,2], tarantula hairs[4,5], ants, and leeches[6] are well-documented. However, beetles causing ocular injuries are rarely reported[7,8] although they have been known to harm other parts of the body[9,10]. We report a case of a beetle trapped in the eye for five days. The patient had little idea of its entrapment despite the symptoms he experienced.

CASE REPORT

A 27-year-old medically-healthy Chinese man presented to our clinic with a five-day history of progressive swelling, redness and foreign body sensation in his right eye. He reported walking along a quiet street when something, which he described as either "ash" or "insect", hit his right eye. He washed his right eye with water almost immediately to relieve the irritation. Two days later, he saw a general practitioner for swelling and redness in his right eye. The doctor did not find any ocular foreign body but prescribed topical antibiotics for his symptoms. The patient's condition worsened in the next 48 hours despite medication, so he saw another general practitioner who subsequently referred him to our clinic after failing to justify the cause of his ocular inflammation.

Ophthalmic examination revealed visual acuities of 6/6 in both eyes. His right lower eyelid was slightly swollen. Intraocular pressure readings were 16 and 15mmHg in the right and left eyes, respectively. Right eye slit-lamp examination revealed inferotemporal conjunctival fornix hyperaemia, where a dark foreign body was seen (Figs. 1 & 2) when the lower eyelid was everted. Anterior and posterior segments of the right eye were otherwise normal. Examination of the left eye was unremarkable.

The foreign body was buried under the conjunctiva in the right conjunctival fornix (Fig. 2). It was firmly stuck to the conjunctiva and was difficult to extract in one piece. The foreign body was subsequently removed in two parts with forceps under biomicroscopic visualisation, following instillation of topical alcaine 1.0%. Closer examination showed the two parts were the head (Fig. 3) and body (Fig. 4) of a hard-shelled insect measuring about 8 mm long and several mm wide. The specimen was sent to the Department of Biological Sciences at the National University of Singapore and identified to be an insect belonging to the order of *Coleoptera cincindelidae*, commonly known as the beetle, found in many parts of the world. The patient was prescribed topical ciprofloxacin four times daily for one week and subsequently made an uneventful recovery.

DISCUSSION

This is a rare case of a whole beetle wedged within the conjunctival fornix for five days. Scarce reports of beetles causing corneal injury, conjunctivitis and periorbital dermatitis have only surfaced in recent years[7,8]. This unusual case illustrates the importance of good history-taking and performing a thorough ophthalmic examination. In cases of suspected ocular foreign bodies, both superior and inferior eyelids should be everted. In this case, the patient could have been diagnosed and treated earlier if a more systematic ophthalmic examination was initially performed.

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Fig. 1 Photograph of the right eye in adduction shows conjunctival hyperaemia which is worst inferotemporally and a dark foreign body embedded in the inferotemporal conjunctival fornix.

Fig. 2 High magnification photograph of the dark foreign body embedded in the inferotemporal conjunctival fornix of the right eye.

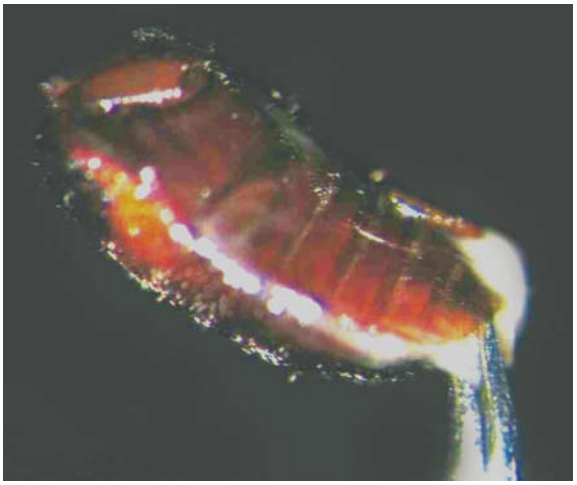

Fig. 3 Photograph of the head of insect removed from the conjunctival fornix.

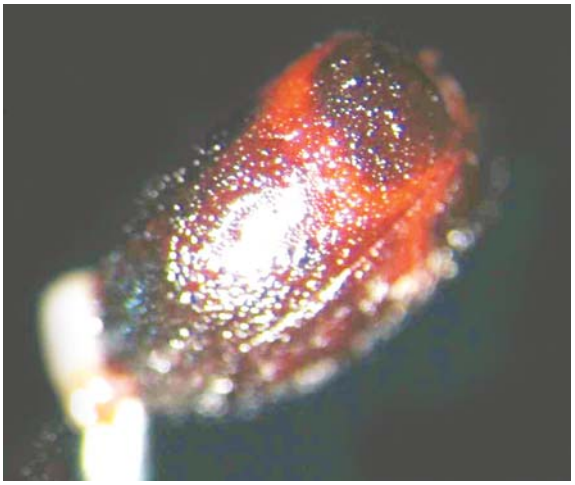

Fig. 4 Photograph of the body of insect removed from the conjunctival fornix.

In addition, prompt handling and identification of the insect species may help in the case management, bearing in mind that some beetles have toxic substances coating their bodies[7] and if allowed to have prolonged contact with the eye, may lead to more serious ocular injuries. Blister beetles, also known as Nairobi flies, are commonly found in East Africa. They have a similar size to the beetle found in our case and have been known to cause keratoconjuctivitis, corneal ulcers, severe lid and periorbital oedema after just a brief contact with the eye[7]. If a Blister beetle was lodged in the eye for prolonged period of time, it may cause more severe and irreversible damage.

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